CLAIM AMENDMENTS

<u>Listing of claims:</u>

1.   (Currently amended)   A computerized method of annotating a computer program comprising:

parsing ~~an annotation representation in the~~ source code and an annotation representation <u>associated with the computer program, wherein the annotation representation annotates a portion of the source code</u>;

transforming the <u>parsed</u> annotation representation into intermediate language code;

generating annotation information from the intermediate language code<u>, wherein the annotation information corresponds to the parsed portion of the source code that the annotation representation annotates,</u> ~~the annotation information corresponding to the annotation representation~~; and

analyzing the computer program with the annotation information ~~before the source code is compiled~~.

2.   (Previously presented)   The computerized method as in claim 1,
wherein the annotation information contains an address; and
wherein the annotation information contains a plurality of arguments of the annotation representation.

3.   (Original)   The computerized method as in claim 2, wherein annotation information further comprises an annotation symbol.

4.   (Original)   The computerized method as in claim 2, wherein a convention in the arguments identifies different areas of interest.

5.   (Original)   The computerized method as in claim 2, further comprising:

generating at least one argument of the annotation representation according to a software component.

6.   (Original)   The computerized method as in claim 5, wherein the software component is selected from the group consisting of a macro and a command line definition.

7.   (Original)   The computerized method as in claim 1, further comprising:
   receiving an input argument; and
   controlling the generating of the annotation information in accordance with the input argument.

8.   (Original)   The computerized method as in claim 1, wherein:
   the parsing is performed by the front-end component of a compiler; and
   the generating is performed by the back-end component of the compiler.

9.   (Currently amended) The computerized method as in claim 1, further comprising:
   generating computer executable instructions from the portion of the source code that is associated with the annotation representation annotates; and
   associating the annotation information with the computer executable instructions that is associated with the annotation representation.

10.   (Previously presented)   The computerized method as in claim 1, wherein the annotation representation is located inline within a function.

11.   (Currently amended) The computerized method as in claim 1, further comprising[[:]] generating debug information from predetermined information, and wherein the debug information is associated with the annotation representation.

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12.   (Original)   The computerized method as in claim 11, wherein the predetermined information further comprises command line options.

13.   (Currently amended) The computerized method as in claim 1, wherein the annotation representation further comprises a function call, and wherein the annotation information comprises arguments further-comprise parameters.

14.   (Currently amended)   A computerized method for comprising: annotating computer source code, comprising: before the source code is compiled

generating annotation information from an intrinsic function call in the source code, wherein the annotation information annotates at least one parameter associated with the intrinsic function call;

generating a symbol from the at least one parameter;

emitting the annotation information into a computer object file; and

emitting the symbol to a symbol table associated with the computer object file, wherein the annotation information corresponds to the at least one parameter by the association between the symbol table and the computer object file.

15.   (Cancelled)

16.   (Currently amended) The computerized method as in claim 14 15, wherein generating annotation information and emitting the annotation information are performed in parallel with generating a symbol and emitting the symbol.

17.   (Currently amended) The computerized method as in claim 14 15, further comprising:

generating computer executable instructions from the source code that is associated with the intrinsic function call; and

associating the annotation information with the computer executable instructions.

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18.   (Currently amended)   The computerized method as in claim 14 15, wherein a convention in the at least one parameter string parameters identifies different areas of interest in analysis.

19.   (Currently amended)   A computerized method of controlling a first computer program analysis tool, comprising:

generating annotation information that annotates a portion of source code associated with an executable computer program;

compiling the executable computer program, wherein the annotation information corresponds to the portions of the executable computer program that are associated with the portion of the source code that the annotation information annotates;

reading the annotation information from the an executable computer program; and

controlling execution of the first computer program analysis tool using the annotation information before source code associated with the executable computer program is compiled.

20.   (Currently amended)   The computerized method as in claim 19, wherein[[,]] the first computer program analysis tool further comprises a program analysis tool selected from the group consisting of a debugger, profiler, a fault injector, and an optimizer.

21.   (Cancelled)

22.   (Original)   The computerized method as in claim 19, wherein an output of the first computer program analysis tool is read as input to a second computer program analysis tool.

23.   (Original)   The computerized method as in claim 22, wherein the second computer program analysis tool further comprises a program analysis tool selected from the group consisting of a profiler, a fault injector, and an optimizer.

24.   (Currently amended)   A computerized method of modifying an executable computer program, comprising:

generating annotation information that annotates a portion of source code associated with the executable computer program;

compiling the executable computer program, wherein the annotation information corresponds to the portions of the executable computer program that are associated with the portion of the source code that the annotation information annotates;

reading the annotation information in the an executable computer program; and

modifying the executable computer program in accordance with the annotation information before source code associated with the executable computer program is compiled.

25.   (Currently amended)   The computerized method as in claim 24, wherein the modifying further comprises[[:]] inserting code into the executable computer program to perform an action in accordance with the annotation information.

26.   (Currently amended)   The computerized method as in claim 24, wherein the modifying further comprises[[:]] optimizing the executable computer program in accordance with the annotation information.

27.   (Currently amended)   The computerized method as in claim 24, wherein the annotation information having been generated from an intrinsic annotation function call that the executable computer program was compiled from, the annotation information comprises having at least one string parameter.

28.   (Currently amended)   A computer-readable medium having computer-executable instructions to a cause a computer to perform a method comprising:

parsing an intrinsic annotation function call within source code associated with a computer program[[,]] thereby generating a parsed annotation function, wherein the parsed annotation function annotates a portion of the intrinsic annotation function call;

generating annotation information from the parsed annotation function; and

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analyzing the computer program with the annotation information, wherein the annotation information corresponds to the portion of the intrinsic function that the parsed annotation function annotates before the source code is compiled.

29.   (Original)   A computer-readable medium as in claim 28, having computer-executable instructions to a cause a computer to perform a method further comprising:

generating a symbol from string parameters of the intrinsic function call; and

emitting the symbol to a symbol table associated with the annotation information.

30.   (Original)   A computer-readable medium as in claim 28, wherein the annotation information resides in an object file that is stored on a computer-readable medium.

31.   (Original)   A computer-readable medium as in claim 28, wherein the intrinsic annotation function call is generated by a software component that resides on a computer readable medium.

32.   (Original)   A computer-readable medium as in claim 31, wherein the intrinsic annotation function call is selected from the group consisting of a macro and a command line definition.

33.   (Currently amended)   A computer-readable medium having computer-executable instructions to cause a computer to perform a method for controlling a computer program analysis tool, comprising:

generating annotation information that annotates a portion of source code associated with an executable computer program;

compiling the executable computer program, wherein the annotation information corresponds to the portions of the executable computer program that are associated with the portion of the source code that the annotation information annotates;

reading the annotation information in the an executable computer program; and

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controlling execution of the computer program analysis tool using the annotation information ~~before source code associated with the executable computer program is compiled~~.

34.   (Currently amended)   The computer-readable medium as in claim 33, wherein <u>the compiling further comprises compiling the executable computer program from</u> ~~the annotation function includes~~ an intrinsic annotation function call <u>within the source code</u> ~~that the executable computer program was compiled from~~, wherein the annotation information ~~having~~ <u>includes</u> at least one string parameter <u>and the intrinsic annotation function call</u>.

35.   (Currently amended)   A computer-readable medium <u>having computer-executable instructions to a cause a computer to perform a method</u> for modifying an executable computer program<u>,</u> comprising:

<u>generating annotation information that annotates a portion of source code associated with the executable computer program;</u>

<u>compiling the executable computer program, wherein the annotation information corresponds to the portions of the executable computer program that are associated with the portion of the source code that the annotation information annotates;</u>

reading <u>the</u> annotation information in <u>the</u> ~~an~~ executable computer program; and

modifying the executable computer program in accordance with the annotation information ~~before source code associated with the executable computer program is compiled~~.

36.   (Currently amended)   The computer-readable medium as in claim 35, wherein the <u>compiling further comprises compiling the executable computer program from</u> ~~annotation function includes~~ an intrinsic annotation function call within <u>the</u> source code ~~that the executable computer program was compiled from~~, wherein <u>the</u> annotation information ~~having~~ <u>includes</u> at least one string parameter <u>and the intrinsic annotation function call</u>.

37.   (Currently amended)   The computer-readable medium as in claim 35, wherein the modifying further comprises[[:]] inserting code into the executable program to perform an action in accordance with ~~the information in~~ the annotation information.

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38.   (Currently amended)   A computer-readable medium having computer-executable instructions to a cause a computer to perform a method for annotating a computer program, comprising:

parsing a source annotation representation in an executable computer program, yielding a parsed source annotation representation, wherein the parsed source annotation representation annotates a portion of the executable computer program;

generating annotation information from the parsed source annotation representation; and

analyzing the executable computer program with the annotation information, wherein the annotation information corresponds to the portion of the executable computer program that the parsed source annotation representation annotates before source code associated with the source annotation representation is compiled.

39.   (Currently amended)   A computer-readable medium having stored thereon a data structure that is executable by a processor, the data structure comprising:

annotation information corresponding to an annotation function in a source computer program, wherein the annotation information continues to correspond to the annotation function after the source computer program is compiled remains with the source computer program during execution of the source computer program.

40.   (Original)   The computer-readable medium as in claim 39, wherein the annotation information further comprises an operand corresponding to parameters of the annotation function in the source computer program.

41.   (Currently amended)   A computer-readable medium having stored thereon a compiler comprising:

a front-end component that is arranged to parse parses an annotation function call in source code associated with a computer program, thereby generating a parsed annotation function, wherein the parsed annotation function annotates a portion of the source code; and

a back-end component operably coupled to the front-end component, comprising:

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a receiver operably coupled to the front-end component, wherein the receiver is arranged to receive the parsed annotation function,

a transformer operably coupled to the receiver, wherein the transformer is arranged to transform the parsed annotation function into intermediate language code,

a generator operably coupled to the transformer, wherein the generator is arranged to generate ~~generates~~ annotation information from the intermediate language code, and ~~annotation function call, wherein the annotation information remains with the source code during execution of the computer program~~

an analyzer operably coupled to the generator, wherein the analyzer is arranged to analyze the computer program with the annotation information, wherein the annotation information corresponds to the portion of the source code that the parsed annotation function annotates.

42.   (Cancelled)

43.   (Currently amended)   A computer-readable medium having stored thereon a computer program analysis tool ~~apparatus~~ comprising:

a receiver of annotation information from an executable computer program, wherein the annotation information annotates a portion of source code associated with the executable computer program; and

an execution controller operably connected to the receiver, wherein the execution controller ~~that~~ is arranged to control the execution of the computer program analysis tool using the annotation information such that the annotation information corresponds to the portions of the executable computer program that are associated with the portion of the source code that the annotation information annotates ~~before source code associated with the executable computer program is compiled~~.

44.   (Previously presented)   The computer-readable medium, as in claim 43, wherein the execution controller overrides the default behavior of the computer program analysis tool using the annotation information.

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45.   (Previously presented)   The computer-readable medium, as in claim 44, wherein output of the computer program analysis tool is read as input to another computer program analysis tool.

46.   (Currently amended)   A computer-readable medium having stored thereon a computer program analysis tool apparatus comprising:

        a receiver of annotation information from an executable computer program, wherein the annotation information annotates a portion of source code associated with the executable computer program; and

        a modifier of the executable computer program operably connected to the receiver, wherein the modifier that is arranged to modify the executable computer program in accordance with the annotation information such that the annotation information corresponds to the portions of the executable computer program that are associated with the portion of the source code that the annotation information annotates before source code associated with the executable computer program is compiled

47.   (Original)   The computer-readable medium as in claim 46, wherein the modifier further comprises an inserter of executable computer code into the executable program to perform an action in accordance with the information in the annotation information.

48.   (Previously presented)   The computer-readable medium, as in claim 46, wherein output of the computer program analysis tool is read as input to another computer program analysis tool.

49.   (Previously presented)   The computerized method as in claim 13, wherein the function call includes at least one argument.

50.   (Previously presented)   The computerized method as in claim 49, wherein the at least one argument corresponds to a parameter.

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Claims 51-65 (Cancelled)